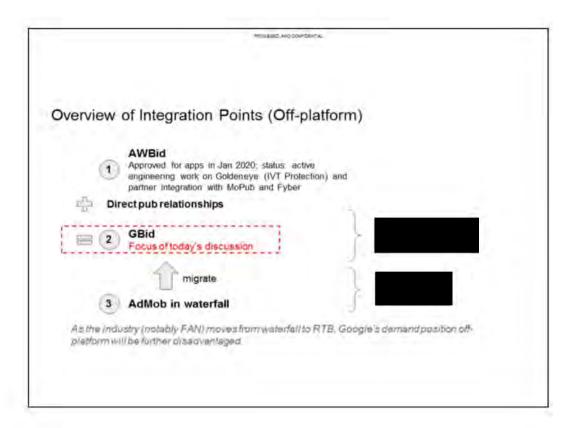


Deck: go/gBid-Deck Notes: go/gBid



What are the key differences between Advanced Bidding and Exchange bidding? Is it just heir implementation and does this align w/ how ADX splits up auctions?

	Medical	MIG COMPOSITIVE.	
Inv	ventory Sourcing Principles		
10	As a competitive buying product, w	e need access to RTB for a	ор
2.	Pub relationships help secure acc	ess and mitigate risk (spam,	discrepancy)
3.	Sustainable long term value by bei	ng not dependable on singl	e partner
		RTB pay exchange (AWBid)	(No pub relationship)
On-Pi	atform > GBid (AWBid + pay Pub)	Multi-call Waterfall Mediation	(Bad auction dynamics)

Publishers will go with whichever of the 4 options that makes them the most money.

We believe that there are strong incentives for publishers to choose GBid over AWBid and Multi-call:

Our buyside is more competitive on GBid yielding higher payouts

Multi-call detection as a buyer protection will improve yield on GBid vs. Multi-call

Margins could be set differently to reflect reduced risk and cost of GBid vs. Multi-call/AWBid

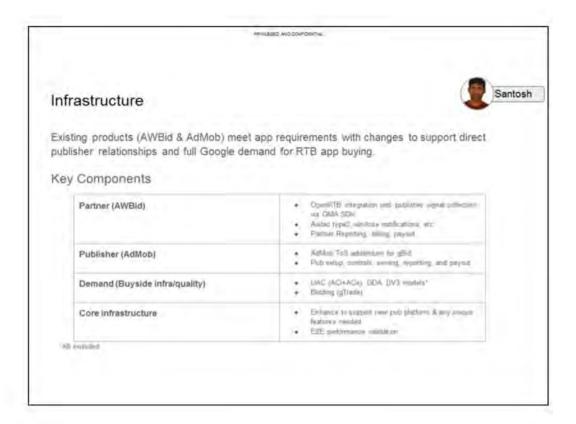
Discrepancies for publishers are lower GBid vs. AWBid

However, we believe that it is simpler to approach the apps market with only two platform options (On-platform, GBid). If we are unable to get inventory access we can consider also offering other options.

ld	Date	Text PRIVLEGED AND CONFIDENTIAL
1	10/01/2020 05:07:15	That's a very valid point. Publishers will indeed do what makes them the most money. We assume that RTB where we pay the pub makes us more competitive, which yields higher revenue. In addition, we need to invest in multi-call detection and be sure to set the right margins.
1	10/08/2020 16:08:21	Either in the slide or in the talking points, it might be worthwhile to note that the publisher lens on this is a little different. Publishers will go with whichever of the 4 options that makes them the most money. So from the sellside perspective, it's beneficial to have at most 2 of these options in the long-term (the first 2). Existence of all 3 off-platform options opens us up to being called in multiple ways - basically whichever combination the pub figures is revenue maximizing for them. @apasha@google.com
2	10/08/2020 16:08:21	Summarized our discussion in the slide notes. PTAL.

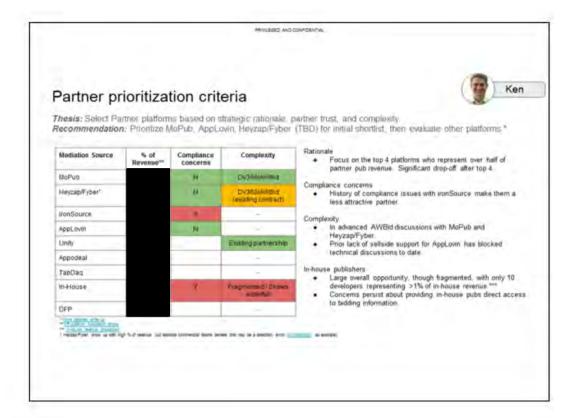


AWBid ➤ Multi-call ➤ Multi-call + RTB ➤ RTB ➤ OB



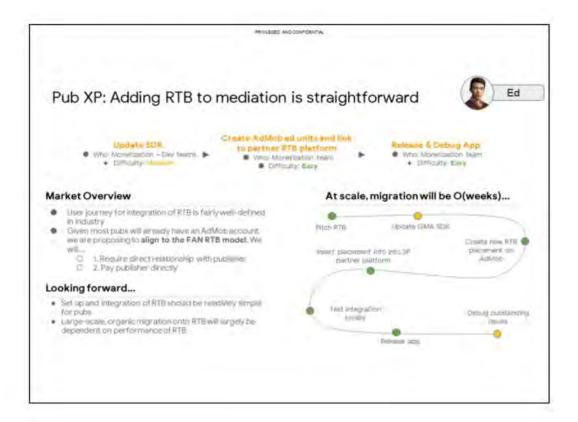
Speaker notes: Partner component and Integration all these components is major pieces of work here.

ld	Date	Text PRIVLEGED AND CONFIDENTIAL	
2	10/01/2020 18:32:43	my hope here is that we're able to re-use the models used for network app traffic and the work here is primarily limited to validation / ensuring all the signals are flowing in accurately.	
1	10/01/2020 18:53:13	Signals from Goldeneye framework (that we plan to use for this integration too, apart from classic external exchange/partner flow) should be same as classic admob request. There may be few of things missing by default (e.g. adunit id) but we can get that easily. Currently feedback/confirmation from Jerry is that we should be able to reuse same models as the rest of app traffic (admob & adx-app)	
1	10/01/2020 19:42:07	[Responding to comment only - haven't gone through the stack yet] We have previously been asked not to use RADS-derived data for bidding on 3P exchange inventory. Do we know if we will be revisiting this decision?	
3	10/01/2020 19:55:55	Does that apply even in the event of a publisher relationship? i.e. when we know this request is coming from a publisher who already has an existing AdMob relationship? I'm guessing we'll need to revisit all these conversations in the context of GBid?	
1	10/01/2020 20:49:19	@jerryzh@google.com @sieong@google.com wanted to make sure you're aware of this slide and agree that the apps buyside component is mostly around quality models?	
2	10/01/2020 20:49:19	RADS-derived data usage restrictions is an internal decision (i.e. not subject to contracts) & we propose to use same data as what we are using on admob/adx-app. Some of these are covered in coop slide (likely moved to Appendix).	
1	10/07/2020 17:56:36	I think the reporting and billing pieces are still going to be relevant. Payout in this case would be platform fees excluding what the pubs earn. @santoshkc@google.com to confirm.	
3	10/07/2020 18:08:26	Yes, we expect a process similar to option-3: (a) These reports would be used for reconciliation of measurement done by partner vs Google (b) We still need to provide a version of exchange report on how the partner fee is computed	
2	10/07/2020 18:18:06	@ethanli@google.com @tmaurer@google.com is this still needed if we're not offering option 3? I'd remove it just for clarity/simplicity.	
3	10/07/2020 18:18:06	sgtm	



 Met with Pub Quality, Ad Spam, T&S, and DV3 vetting to understand compliance history with these platforms.

	Date	Text PRIVLEGED AND CONFIDENTIAL
4	10/07/2020 17:52:51	yeah, do we have any updates on heyzap/fyber numbers? duke seemed surprised to see them so high up on the list.
1	10/08/2020 16:57:38	@gfb@google.com based on your work with Eddie, can you provide new Mediation Source percentages so we can update this table? _Reassigned to Geoff Beresford_
1	10/08/2020 16:57:38	yes, we all believe this number to be spurious. I added a bug-link in the footnote to track that we are working on this.

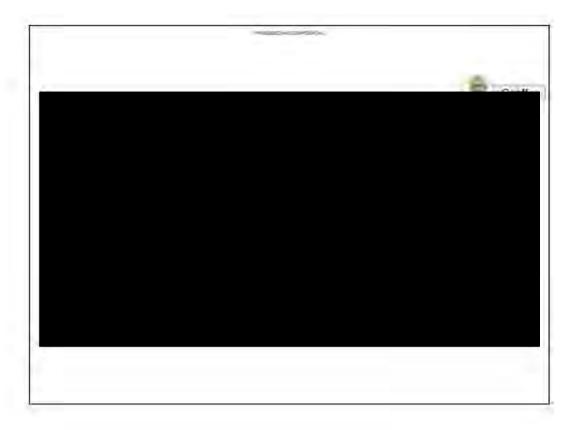


- User journey for integration of RTB is fairly well-defined in industry -Generally, what we'll need is: SDK update, create a new ad placement on AdMob, drop the placement into a 3P partner platform's OB setup, test, release the app, debug.
- Based on the Open Bidding experience, we've seen this migration take weeks... Maybe even less if they already have the latest GMA SDK
- Our vision for the FE pub experience is going to look a lot like the FAN RTB model. We will...
- 1. Require direct relationship with publisher
- 2. Pay publisher directly

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ld	Date	Text PRIVLEGED AND CONFIDENTIAL	
2	09/22/2020 23:53:06	I assume no A/B testing if they aren't switching platforms	
4	09/22/2020 23:54:24	Roughly correct in terms of ordering of steps. Timeline depends very heavily on how the bidder performs and what sort of relationship we have with the exchange we're working with + the publisher. Safe to assume that initially it will take longer for larger pubs. (there's lots we can learn from FAN's experience with us here)	
3	09/22/2020 23:56:39	Got it, thanks. I'm trying to look forward and assume this is what the process will look like once we've worked out all the bidder issues.	
5	09/23/2020 00:01:13	yea, on the long tail it would be much quicker. We have a lot of pubs who the Sales team is able to move from mediation to FB on bidding without any testsso in the scaled case, 1 month might be too high:)	
4	09/25/2020 03:14:07	Regd. A/B testing & migration plan, a couple of thoughts:	
		I think it depends on what strategy we will end up taking: It likely would be organic & gradual if we plan to introduce RTB & keep multi-call mediation as is in the beginning, once bidding out is fully performing we start turnoff mediation over time (i.e. reduce to single call). There probably would be some kind of A/B testing needed (or would be expected by pubs) especially if we want to do more aggressive transition but I am assuming it would be a work-item for partner not us. Does that match with your experience?	
5	09/25/2020 18:04:06	I didn't understand why is this medium difficulty, shouldn't this be easy step?	
4	09/25/2020 18:04:06	It's often harder than you might think for publishers to update their SDKs relative to the rest of their product roadmap; this is especially true for old apps. Also, keep in mind that publishers might have 10s or 100s of apps in their portfolio.	
1	10/01/2020 00:38:55	Ed should we have a slide somewhere in the appendix around why pub relationship is important.	
1	10/01/2020 18:56:19	@abhita@google.com Does this look right to you?	
6	10/01/2020 18:56:19	My expectation here is that the process of evaluating whether RTB is performing will involve testing directly with a few key publishers. So basically, first milestone will likely be a launch with 10 pubs or something like that. Once we've proven performance, then the scaling is quick (i.e. no tests). Also - a single ad placement - will either multicall us or call us in RTB. Both won't be	

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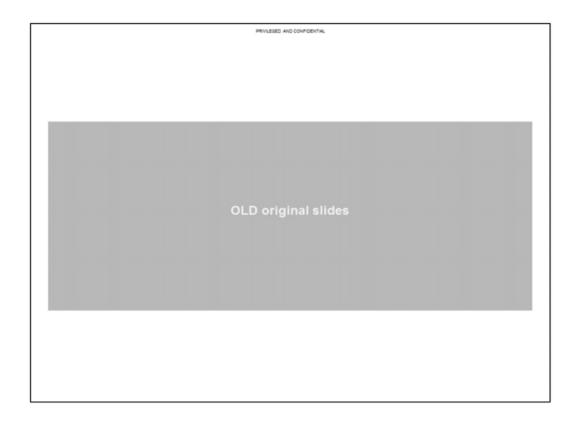
ld	Date	Text PRIVLEGED AND CONFIDENTIAL
8	10/08/2020 16:51:43	@gfb@google.com Why not strictly lesser? _Reassigned to Geoff Beresford_
3	10/08/2020 16:51:43	Inorder for us to take more agressive margins, we need to make the argument that buyside outcomes are worse. While we have good qualitative arguments for on-platform that are outside of the waterfall dynamic, none of them have been assessed with a real net-revenue value.
7	10/08/2020 16:52:29	@gfb@google.com @nirmaljayaram@google.com Doesn't it make sense for this to be better or equal? I personally think equal is good enough here & we're likely not going to be able to do betterReassigned to Geoff Beresford_
2	10/08/2020 16:52:29	added

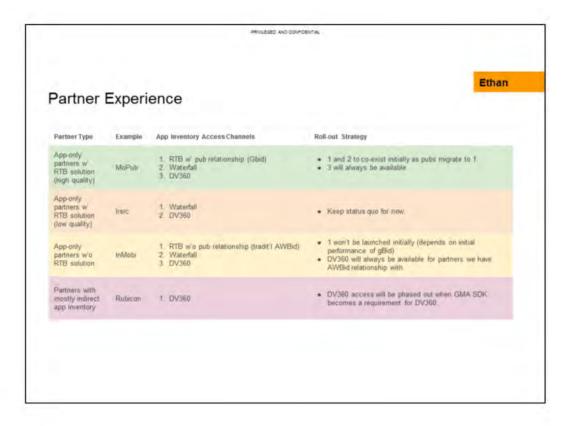


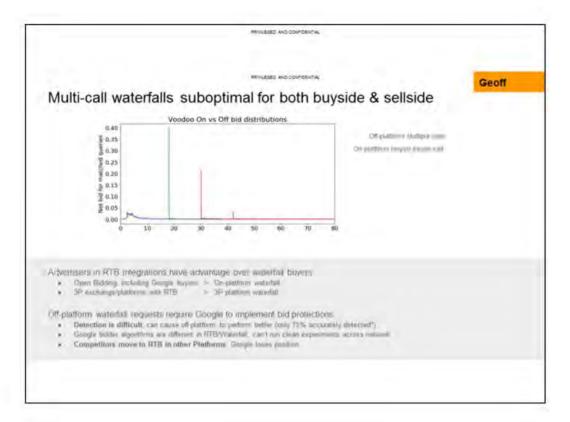
Multi call inefficient
World moving to RTB
We have to move to be competitive on buy side
Keeping both multi call and RTB does not make sense from business perspective

Case 1:23-cv-00108-LMB-JFA Document 1242-4 Filed 08/24/24 Page 15 of 50 PageID# 91241

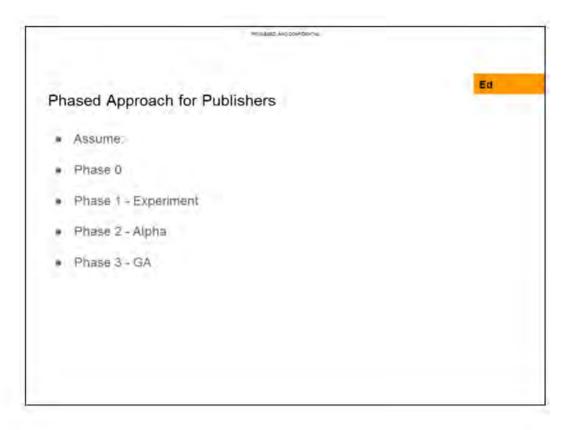
Date	Text	RIVLEGED AND CONFIDENTIAL
10/08/2020 16:24:02	Consider swapping sl	ides 8 and 9? The content on 9 feels more important to cover.
10/08/2020 16:40:55	@ethanli@google.cor PTAL	n @kebbitt@google.com @tmaurer@google.com
10/08/2020 16:40:55	Sissie specifically ask	ed for margins last time, so want to make sure we cover that request
10.00.2020 10.10.00	ologic specifically asi	out of many mark time, so that to make out of the color that request
	10/08/2020 16:24:02 10/08/2020 16:40:55	10/08/2020 16:24:02 Consider swapping sli 10/08/2020 16:40:55 @ethanli@google.com PTAL





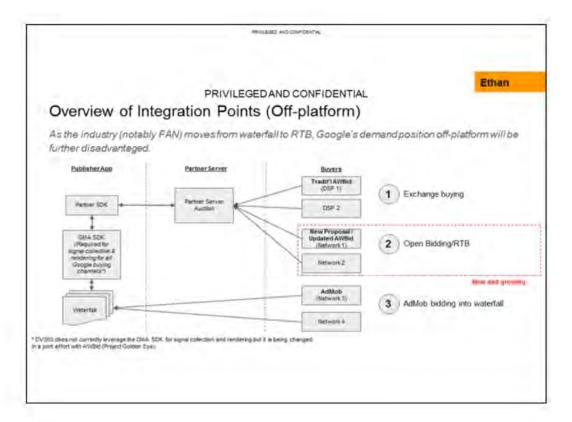


Quickly voice over that multi-call is sub-optimal. Remind Sissie of earlier discussion.



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ld	Date	Text	PRIVLEGED AND CONFIDENTIAL
2	10/01/2020 00:18:27	Do we need to do	additional work around rendering?



What are the key differences between Advanced Bidding and Exchange bidding? Is it just heir implementation and does this align w/ how ADX splits up auctions?

AMMERICAN CONTROL

Pre-read and Framing

- Multi-call and impact on Sell-side
- 3P Auction Access critical to Buy-side --- Overview of 3P integration points

Main content

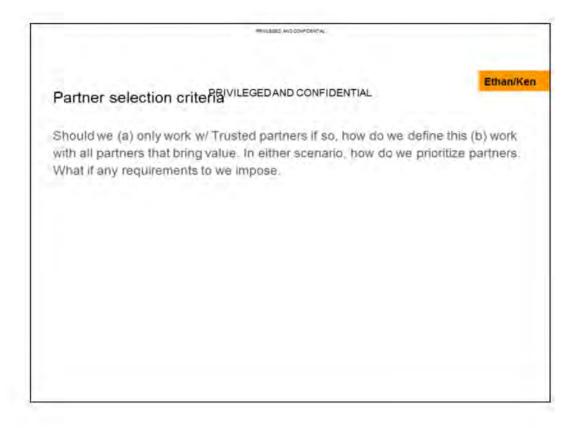
- Inventory sourcing principles
- End state vision
- Overview of Proposal
- Infrastructure
- Margin
- exchange selection
- publisher experience

If asked what do we need to make thing happen, should we provide high-level 2021 Statting Plan?



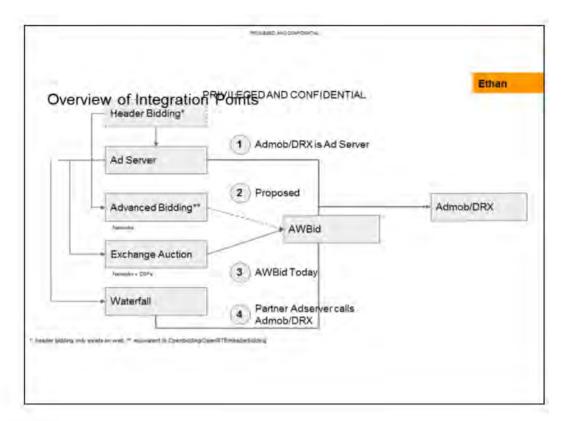
Case 1:23-cv-00108-LMB-JFA Document 1242-4 Filed 08/24/24 Page 24 of 50 PageID# 91250

Date	Text PRIVLEGED AND CONFIDENTIAL
09/24/2020 00:43:03	It varies from case to case but we will definitely ask for this in our negotiation with partners. FB has this in their OB relationship with us, which implies they might have this with MoPub as well, further implying MoPub might be open to doing this with us given the FB precedent. At this point I don't think pub relationship makes a difference as the key dependency here is partner contract and signal collection capability, both of which are common with the traditional AWBid solution.
09/24/2020 04:06:30	Who would have to approve this internally? And will our systems be able to handle different treatments for different 3PEs or will this require eng work (AFAIK all 3PE traffic today has the same treatment - can't use audience data)
09/24/2020 22:15:41	Generally we have the approvals. It's mostly a matter of building, testing and tuning to make sure we get the best performance. We have the capability today to treat different exchanges differently based on how the contracts are structured and in fact we are already doing this for 3PE data co-op on DV360.
09/24/2020 23:33:41	@ethanli@google.com it sounds like we don't get the permissions from 3PE today? will the pub relationship help?
09/24/2020 23:33:41	To clarify - the incremental work needed here is expected to be marginal from bidding-out pov (as it rolls into overall project work).
	09/24/2020 00:43:03 09/24/2020 04:06:30 09/24/2020 22:15:41 09/24/2020 23:33:41

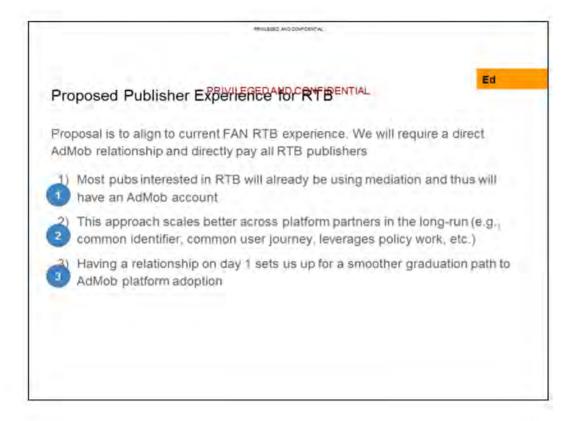


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ld	Date	Text PRIVLEGED AND CONFIDENTIAL
1	09/30/2020 19:23:30	I think we really need to flesh this out. We need to make our demand something that helps may the market better. @apasha@google.com @gfb@google.com FAN had a code of conduct, should we consider a similar approach?
		@apasha@google.com @gfb@google.com
		FAN had a code of conduct, should we consider a similar approach?



What are the key differences between Advanced Bidding and Exchange bidding? Is it jus their implementation and does this align w/ how ADX splits up auctions?



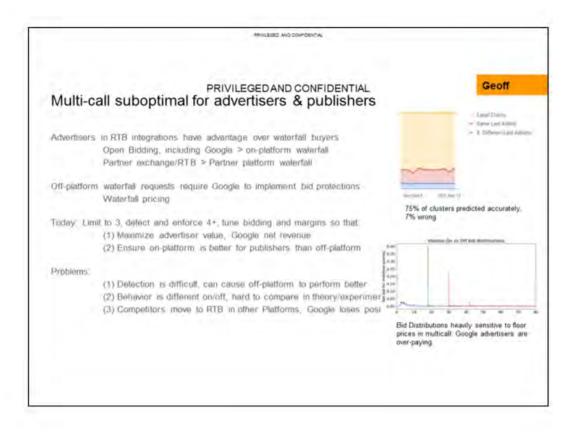
What happens if they don't have AdMob account? They can easily create one, if they don't do it, we will buy through AWBid = status-quo, but clarify the value-add for transition from AWBid to "Bidding out"

Date	Text PRIVLEGED AND CONFIDENTIAL
09/17/2020 22:20:49	add: - bar to create admob account is low and no hurdle - else status quo: awbid buys
09/17/2020 22:20:49	
09/17/2020 22:22:08	Redacted - Privilege
	09/17/2020 22:20:49 09/17/2020 22:20:49



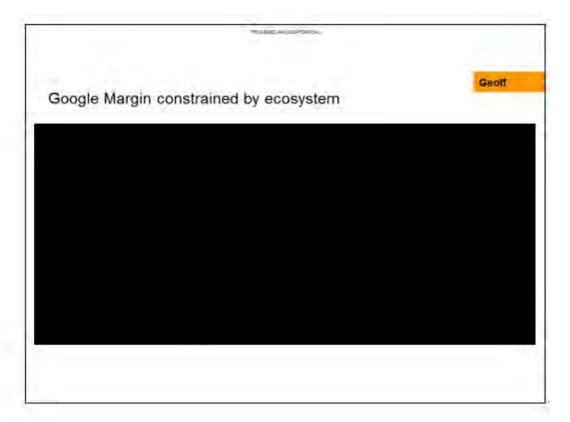
Case 1:23-cv-00108-LMB-JFA Document 1242-4 Filed 08/24/24 Page 31 of 50 PageID# 91257

ld	Date	Text PRIVLEGED AND CONFIDENTIAL
5	09/17/2020 22:29:53	suggestions: - make more clear what is forced vs. publishers moving from one step to the next
6	09/17/2020 22:29:53	- maybe move the forced stuff to slide 4 and talk about how pubs graduate here
5	09/22/2020 22:50:04	Ed to update this slide to reflect tactical migration from Multi-call to RTB+Multi-call Proposed user journey: Create a new RTB placement on AdMob, copy AdMob ad unit information, go to partner platform, add AdMob ad unit information



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ld	Date	Text PRIVLEGED AND CONFIDENTIAL
6	09/17/2020 18:48:36	added
2	09/17/2020 22:29:19	cover waterfall/multi-call shutdown in this slide
3	09/18/2020 20:30:25	@abhita@google.com - thoughts? @gfb - can we include this: https://docs.google.com/presentation/d/1JI3q- 0Mw59KURULfcPQbeafh6sAzdwrvr8iul4xsUWc/edit#slide=id.g92acc8d72f_19_50
10	09/18/2020 20:30:25	Igtm



We want this product to help bridge the gap from off-platform waterfalls to on-platform monetization. Therefore, the payout for equivalent queries needs to land in between these two

We trace here the journey of \$1 from an advertiser as it makes its way to a publisher under this new product.

We try to illustrate some intuition (in yellow) that:

If we pay out too agressively, then publishers will adopt this rather than on-platform or other preferred solutions

If we pay out too conservatively, then publishers will remain on waterfall rather than adopt this product

This gives us upper/lower bounds.

We also know that we have only a 1-2% accuracy interval when we try to hit a particular margin, so we need to constrain more aggressively to ensure we don't accidentally hit outside the targets.

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ld	Date	Text PRIVLEGED AND CONFIDENTIAL
7	09/29/2020 23:03:12	update vocabulary to be RTB w/ pub relationship?

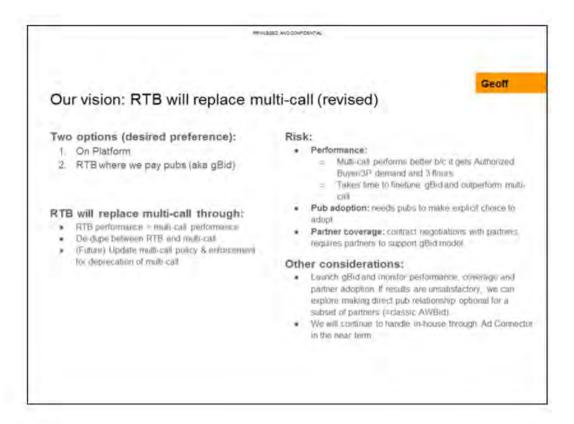


Case 1:23-cv-00108-LMB-JFA Document 1242-4 Filed 08/24/24 Page 37 of 50 PageID# 91263

ld	Date	Text PRIVLEGED AND COMPDENTIAL
2	10/07/2020 20:01:28	@nirmaljayaram@google.com @gfb@google.com
		What is the current on-platform margin?

Case 1:23-cv-00108-LMB-JFA Document 1242-4 Filed 08/24/24 Page 38 of 50 PageID# 91264

PRIVLEGED AND CONFIDENTIAL	
Address multi call	
Get better access to buy side, competitors likely 2 years ahead	



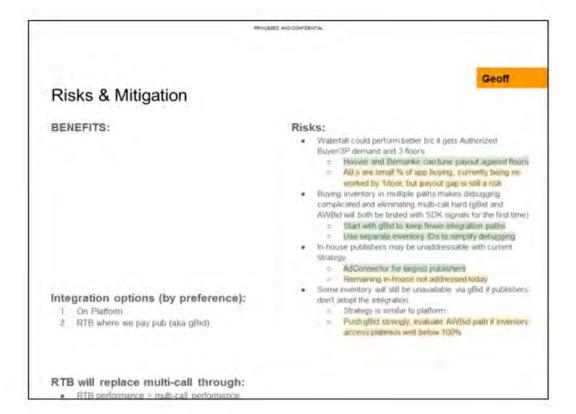
Multi call inefficient
World moving to RTB
We have to move to be competitive on buy side
Keeping both multi call and RTB does not make sense from business perspective

HIGHLY CONFIDENTIAL GOOG-DOJ-AT-02307401

Case 1:23-cv-00108-LMB-JFA Document 1242-4 Filed 08/24/24 Page 40 of 50 PageID# 91266

ld	Date	Text PRIVILEGED AND CONFIDENTIAL
11	10/01/2020 18:30:44	Agree. However, the process of deciding that RTB >> multicall will likely involving testing with publishers? Once we are confident the performance is there and it's possible to kill multicall, we can make an announcement
2	10/01/2020 19:05:27	I imagine we can test through the awbid path first without even necessarily involving publishers right? Or we can try to run beta tests
7	10/01/2020 19:06:42	Two things worth noting: - Some of the onus on A/B testing falls on partner (just like we did that work for admob platform pubs) - We probably can come up a mechanism for smoother migration e.g. if 3p clears out Admob from mediation chain whenever we submit bid via RTB channel (same as what admob does for FAN).
1	10/01/2020 19:50:26	once we are comfortable with RTB, we will set the limit to 1 call. I don't want to go down this world again of publishers running A/B and picking one or the other.
12	10/01/2020 19:50:26	Yea - I think we're saying the same thing. Everything would be via the partner (for instance, MoPub). But MoPub is running test with pub on the other end & our AMs are getting us direct feedback from the pub as well. Which is basically how FAN has operated through us and brought up their performance.
4	10/07/2020 17:35:45	Hi team, updated slide 2, 6, 10 based on today's discussion on gBid. PTAL. Thanks. @gbid@google.com
5	10/07/2020 17:35:45	Adding folks in case the group email notification doesn't go through. @tmaurer@google.com @apasha@google.com @cfacanha@google.com @nirmaljayaram@google.com @santoshkc@google.com @abhita@google.com @gfb@google.com @kebbitt@google.com @edweng@google.com @namvar@google.com

HIGHLY CONFIDENTIAL GOOG-DOJ-AT-02307402



Multi call inefficient
World moving to RTB
We have to move to be competitive on buy side
Keeping both multi call and RTB does not make sense from business perspective

Case 1:23-cv-00108-LMB-JFA Document 1242-4 Filed 08/24/24 Page 42 of 50 PageID# 91268

Date	Text PRIVLEGED AND CONFIDENTIAL
10/01/2020 18:30:44	Agree. However, the process of deciding that RTB >> multicall will likely involving testing with publishers? Once we are confident the performance is there and it's possible to kill multicall, we can make an announcement
10/01/2020 19:05:27	I imagine we can test through the awbid path first without even necessarily involving publishers right? Or we can try to run beta tests
10/01/2020 19:06:42	Two things worth noting: - Some of the onus on A/B testing falls on partner (just like we did that work for admob platform pubs) - We probably can come up a mechanism for smoother migration e.g. if 3p clears out Admob from mediation chain whenever we submit bid via RTB channel (same as what admob does for FAN).
10/01/2020 19:50:26	once we are comfortable with RTB, we will set the limit to 1 call. I don't want to go down this world again of publishers running A/B and picking one or the other.
10/01/2020 19:50:26	Yea - I think we're saying the same thing. Everything would be via the partner (for instance, MoPub). But MoPub is running test with pub on the other end & our AMs are getting us direct feedback from the pub as well. Which is basically how FAN has operated through us and brought up their performance.
10/07/2020 21:05:43	Perhaps replace this entire thing with 1 line (which was earlier the title of this slide): "Our vision: RTB will replace multical!" The sub-bullet are too much detail and not necessary I think.
	10/01/2020 18:30:44 10/01/2020 19:05:27 10/01/2020 19:06:42 10/01/2020 19:50:26 10/01/2020 19:50:26

HIGHLY CONFIDENTIAL GOOG-DOJ-AT-02307404

PRIVLEGED AND CONFIDENTIAL

Pros and Cons: RTB to The total and the second constant of the secon

Replace

Keep

- Potentially more revenue to pubs through multi call
- Inefficient and costly
- Self competition

Case 1:23-cv-00108-LMB-JFA Document 1242-4 Filed 08/24/24 Page 44 of 50 PageID# 91270

	Text PRIVLEGED AND CONFIDENTIAL
09/24/2020 23:25:26	@gfb@google.com @ethanli@google.com can you guys take a crack at proposing the pros and cons of replacing vs. keeping multi ca based on our discussion I think we're all aligned that we want to replace multi call but let us know if you disagree.
	can you guys take a crack at proposing the pros and cons of replacing vs. keeping rebased on our discussion I think we're all aligned that we want to replace multi-call by

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Outline

PRIVILEGED AND CONFIDENTIAL

- 1. Inventory Principles Tobias/Carlos/Ali/Deepti
 - a. Sellside & Multicall Geoff
 - b. Publisher relationship Leads
- 2. Background might move to appendix/pre-read
 - a. Overview of Integration Points Ethan
 - b. Infrastructure AWBid Ethan
- 3. Questions/Decisions we want Sissie's guidance on these
 - a. Partner prioritization criteria Ethan/Ken
 - b. Google Audience Data Ethan
 - c. Margins Geoff
 - d. Pub Experience / Migration path Ed

Case 1:23-cv-00108-LMB-JFA Document 1242-4 Filed 08/24/24 Page 46 of 50 PageID# 91272

ld	Date	Text	PRIVLEGED AND CONFIDENTIAL
4	09/29/2020 18:59:18	Let's remove the	names before the meeting.



We want this product to help bridge the gap from off-platform waterfalls to on-platform monetization. Therefore, the payout for equivalent queries needs to land in between these two

We trace here the journey of \$1 from an advertiser as it makes its way to a publisher under this new product.

We try to illustrate some intuition (in yellow) that:

If we pay out too agressively, then publishers will adopt this rather than on-platform or other preferred solutions

If we pay out too conservatively, then publishers will remain on waterfall rather than adopt this product

This gives us upper/lower bounds.

We also know that we have only a 1-2% accuracy interval when we try to hit a particular margin, so we need to constrain more aggressively to ensure we don't accidentally hit outside the targets.

Case 1:23-cv-00108-LMB-JFA Document 1242-4 Filed 08/24/24 Page 48 of 50 PageID# 91274

ld	Date	Text PRIVLEGED AND CONFIDENTIAL
7	09/17/2020 17:40:46	@apasha@google.com @nirmaljayaram@google.com I think this captures Nirmal's argument, thoughts?
6	09/17/2020 21:50:09	This is a really good diagram. Will we consider changing RTB margins after we deprecate mediation waterfalls? Presumably we will need to buy ourselves more space for on-platform advantage.
5	09/21/2020 05:12:48	Geoff, how do we handle off-platform multi-call in this scenario?
9	09/29/2020 18:31:42	overview on margins on awbid today and how they compare w/ other inventories
8	09/29/2020 18:31:42	(moved this slide to appendix, a new copy exists upstairs in #16)



Speaker notes: Partner component and Integration all these components is major pieces of work here.

